

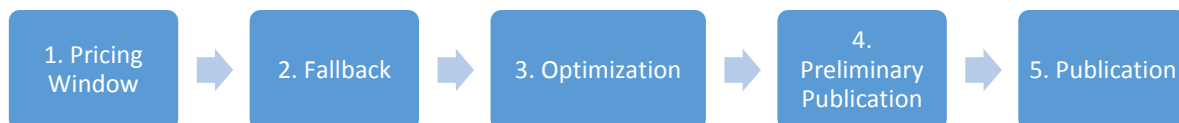
## Explanatory Note - Settlement prices publication End-of-day report for Energy commodities

At the end of each business day, ICE Endex establishes settlement prices for the markets it operates. These settlement prices are published as part of the End of Day Report, an automatically derived report publishing the full curve of tradable contracts available at ICE Endex. The settlement prices are used by the Clearing House, ICE Clear Europe Limited (ICE Clear), to calculate margins for the relevant contracts.

The purpose of this note is to explain the methodology of establishing these settlement prices. This is for information only, and on the sole condition that any errors and/or omissions in this document shall not be the basis for any claim, demand, or cause of action.

Given their theoretical nature, end-of-day settlement prices are considered less suitable as a basis for supplying intermediary services to non-professional clients (e.g. as a parameter in commercial delivery contracts). In order to be able to use these prices as published it is expected that such person has reasonable professional understanding of the price formation process on wholesale energy markets.

The settlement prices are established on the basis of the following steps:



- (1) Settlement prices, established by means of the pricing window, are prices based on trades fulfilling pre-defined conditions (as detailed later in this document), leading to a higher transparency of the calculation input;
- (2) Settlement prices established by means of the fallback-methodology are prices resulting from a market assessment.

Settlement prices before their publication are displayed on the trading platform as preliminary settlement prices to market parties, and subject to a 5 minute window that allows market participants to submit remarks on the curve level. Once the 5 minute window is closed the settlement prices are final and will be published.

### 1. Pricing Window Methodology

The basic principle underpinning the pricing window-methodology is that settlement prices will be based on trades executed in the order book during a pre-defined time period, complying with the minimum total traded volume requirement as set per individual market. The settlement price resulting from the pricing window shall be the volume weighted average price (VWAP) of the trades executed during that pre-defined time period.

Only transactions executed in the order book of the ICE Endex Futures Exchange are taken into account for calculating the prices; block trades, EFPs and EFSs reported by means of the Block Trade Facility are disregarded. Trades which have been cancelled during the pricing window will not be included in the calculations either. As part of its responsibilities as an operator of a Regulated Market under MiFID, ICE Endex will monitor market developments during the pricing window and will not consider individual trade prices in case they are not in line with the actual conditions of the market.

## **2. Fall back Methodology**

In the absence of valid transactions during the pricing window, the following factors will be taken into consideration:

- **Quotes during the Pricing Window;**  
The average price of the bid and ask quotes complying with the settlement requirements as set per individual market will be used as preliminary settlement price.
- **Implied Price;**  
If applicable, the implied price of the missing strip will be used as preliminary settlement price.
- **Trading activity during the day;**  
The market activities (quotes, trades and market trend) during the day will be used as input.
- **External sources;**  
The latest market activities (quotes, trade and market trend) as available by external data provider(s) will be used as input.
- **Correlated Market as proxy;**  
The market trend of the market of which price formation in the past has shown to be most heavily correlated will be used as input.
- **Price assessment;**  
This is a discretionary assessment combining multiple sources (from market parties, market trend and/or previous settlement) of input.



3. No valid trades and no valid orders on screen:

- ⇒ Fall back scenario comes in place to establish settlement prices (i.e. implied price if applicable, otherwise trading activities during the day or alternative fallback as per the ranking order of preference)

TIME	Best Bid	Best Ask	Trade
15:46 - 15:48 <sup>1</sup>	58.80 (5 MW)	60.80 (10 MW)	

**Average Trade Price**                    -                    }                    **Settlement price**                    Alternative fallback  
**Average Mid Order Price**                    -                    }

### 3. Basics of the optimisation step

Since the settlement prices are established by ICE Endex for the prime purpose of allowing the Clearing House to risk manage positions, in some circumstances the settlement prices, as determined by either the pricing window or alternative sources, may need to be adjusted to ensure they are free of arbitrage. The free-of-arbitrage requirement is set by the Clearing House in order to cater for a secure and correct margining process. Contracts with overlapping delivery periods will need to be consistent. Furthermore, the settlement price of the composite contracts will need to be cascaded into monthly settlement prices for the purpose of building a forward curve with a monthly granularity.

The month which has traded the higher volume of the first two months contracts will be the designated contract from which the settlement is anchored, provided that the volume traded during the designated settlement period is equal to or exceeds a level determined by the Exchange from time to time.

### 4. Preliminary publication of settlement prices

The above-mentioned forward curve is supplied to the market as a range of preliminary settlement-prices first, through the trading platform. As from this moment, the members have a 5 minute window of opportunity to raise potential concerns on the price-curve. If no concerns are raised in this 5 minute window, the curve will be final. If comments are received that are considered valid and Market Supervision has decided to amend the preliminary settlement, the new settlement prices will again be published on the trading platform with again a 5-minute window of opportunity for the market to give raise concerns. In case none have been raised in this 5 minute window, the curve will become

<sup>1</sup> Minimum bid/ask spread requirement not met

final. If however in the 5 minute window valid comments are received and Market Supervision had to amend the settlement-prices, an additional 5 minute unofficial window will be published until no further comments have been received.

To allow for timely processing, comments and remarks on the preliminary settlement prices must be addressed directly to the Market Supervision team reachable at +44 (0)20 7382 8200, Option 3.

## **5. Publication of settlement prices**

After ICE Endex has established settlement prices for all contracts (in strips of months), the settlement prices are automatically published in the End of Day Report at the ICE Report Centre, [www.theice.com](http://www.theice.com). The settlement prices are used by ICE Clear Europe to calculate margins for the relevant contracts.

## **6. Usage of settlement prices for other means than risk management by the clearinghouse**

Given their theoretical nature, end-of-day settlement prices are considered less suitable as a basis for supplying intermediary services to non-professional clients (e.g. as parameter in commercial delivery contracts). A reasonable professional understanding of the price formation process on wholesale energy markets is expected with anyone using the prices as published in the report.